MT/4834A

Attorney's Docket No.: 05770-121001 / AMSC-487 (NE)

#9/Response

Hawkins

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Swarn S. Kalsi	Art Unit	: 2834
Serial No.	: 09/632,600	Examiner	: D. Le
Filed	: August 4, 2000		
Title	: EXCITER FOR SUPERCONDUCTING ROTATING MACHINERY		

RESPONSE TO FINAL OFFICE ACTION

In response to the action mailed May 2, 2002, please reexamine and reconsider the claims in view of the following remarks.

The Examiner rejected independent claims 1 and 8 as being anticipated by the Mole patent (U.S. 4,058,746). It appears from paragraph one of the office action that it is the Examiner's position that because Mole's generator includes a pair of windings, it can operate as a transformer. Thus, the Examiner proposes that Mole's stator and superconducting windings are a primary and secondary of a rotary transformer. We submit, however, that the Examiner's position is technically incorrect. In particular, a generator and a transformer are different devices and perform very different functions. The mere fact that they may share common components (i.e., windings) does not mean that they are one in the same. In the broadest sense, a generator generates energy and, in the context of Mole, converts mechanical energy into electrical energy. A transformer on the other hand, does neither. A transformer uses mutual induction to transfer a time varying current in a primary winding to induce a time varying current in a secondary winding.

It is important to note that the set of windings identified by the Examiner as being primary and secondary windings, that is, stator winding 111 and superconducting coil winding 115, do not function as the windings of a transformer. Mole's stator winding 111 is an AC winding (see column 9, line 29-31). Mole's superconducting coil winding 115, however, carries a DC current (see column 6, line 16-18). Because a DC current cannot induce a time varying

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September 3, 2002
Date of Deposit

Terri L Knox
Signature

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Typed or Printed Name of Person Signing Certificate

field, the superconducting coil winding cannot operate as part of a transformer. To further distinguish the two devices, Mole's cylindrical rim 137, which is composed of ferromagnetic material acts as a wall (see column 9, line 7). This wall prevents AC fields from penetrating into the superconducting winding region (see column 9, line 12-16). This cylindrical rim will only allow DC flux to pass through it. Thus the superconducting coil winding 115 can only carry a DC current and is protected from the AC field (see column 9, line 34-37).

For at least the reasons above, we submit that independent claims 1 and 8 are patentable over the cited references. Because claims 2-7 depend from independent claim 1, we submit that these dependent claims are allowable for at least the same reason that claim 1 is allowable. Enclosed is a Petition for One Month Extension of Time with the required fee of $110. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: September 3, 2002

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